

CLAIMS

1. A method of enabling a user to instruct a computer system to perform an operation via:
 - 5 an interface surface including an interface, the interface including visible graphical information and substantially invisible coded data; and
 - a sensing device which, when placed by the user into an operative position relative to the interface surface to designate at least some of the graphical information, senses indicating data indicative of the operation using at least some of the coded data;
 - 10 the method including the steps of, in the computer system: - receiving the indicating data from the sensing device; and
 - performing the operation indicated by the indicating data;
 - wherein the graphical information designated by the user is at least partially indicative, to the user, of the operation.
- 15 2. A method according to claim 1, wherein the graphical information designated by the user is adjacent, or substantially coincident with, coded data upon which the indicating data is based.
- 20 3. A method according to claim 2, wherein the graphical information takes the form of any combination of:
 - text;
 - graphics;
 - icons; and
 - hypertext links.

4. A method according to any one of the preceding claims, wherein the coded data takes the form of one or more control tags.
5. A method according to claim 4, wherein each of the control tags defines a discrete bundle of the coded data.
6. A method according to claim 4, wherein each of the control tags has a predetermined spatial extent on the surface.
- 10 7. A method according to claim 4, wherein the tags take the form of bar codes.
8. A method according to claim 7, wherein the bar codes are two-dimensional bar codes.
- 15 9. A method according to claim 4, wherein each control tag defines coded data that is unique compared to the coded data defined by other control tags on the same surface.
- 20 10. A method according to claim 9, wherein the unique coded data associated with each control tag identifies a position of that control tag within a region of the surface.
11. A method according to claim 10, wherein the position is identified relative to
12. A method according to claim 10, wherein the position is identified relative to other control tags on the same surface.

13. A method according to any one of claims 4 to 12, wherein each of the control tags includes a common feature in addition to the coded data.

5 14. A method according to claim 13, wherein the common feature is configured to assist finding and/or recognition of the control tags by the sensing device.

15. A method according to claim 13, wherein the common features are represented in a format incorporating redundancy of information.

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16. A method according to any one of claims 4 to 12, wherein each of the control tags includes one or more orientation features for enabling a rotational orientation of the control tag being read to be ascertained.

15 17. A method according to claim 16, wherein the orientation features are represented in a format incorporating redundancy of information.

18. A method according to any one of claims 4 to 12, wherein each control tag is defined by a plurality of control tag elements, the coded data being encoded in and
20 defined by the control tag elements.

19. A method according to claim 18, wherein each element takes the form of a dot having a plurality of possible values.

21. A method according to claim 18, wherein when representing one of the possible

values, the control tag elements absorb, reflect or fluoresce electromagnetic radiation of a predetermined wavelength or range of wavelengths to a predetermined greater or lesser extent than the interface surface.

- 5 22. A method according to claim 21, wherein the possible values of the control tag elements are defined by different relative absorption, reflection or fluorescence of electromagnetic radiation of a predetermined wavelength or range of wavelengths.

23. A method according to claim 10, wherein the coded data identifies remotely
10 stored information defining the relative position.

24. A method according to claim 10, wherein the coded data includes region identification information that identifies the region within which the respective coded data is disposed.

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25. A method according to claim 25, wherein the region encompasses substantially the entire surface.

26. A method according to claim 10, wherein the coded data includes data
20 identification information that identifies data associated with the region within which the respective coded data is disposed.

27. A method according to any one of claims 4 to 12, wherein the coded data includes region identification information that identifies the region within which the
25 coded data is disposed and at least a predetermined proportion of the control

28. A method according to any one of claims 4 to 12, wherein the coded data

includes data identification information that identifies data associated with the region within which the respective coded data is disposed, and at least a predetermined proportion of the control tags includes the data identification information.

5 29. A method according to any one of the claims 1 to 12, wherein the surface is defined by a page.

30. A method according to claim 31, wherein the page is paper or any other planar or laminar substrate.

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31. A method according to claim 30, including the initial step of printing the coded data onto the surface by means of a printer.

32. A method according to claim 31, wherein the printer is an ink printer.

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33. A method according to claim 32, wherein the coded data is printed using ink that is absorptive or reflective in the ultraviolet spectrum or the infrared spectrum.

34. A method according to claim 31, wherein the printer also prints the graphical
20 information onto the interface surface.

35. A method according to claim 34, wherein the graphical information is printed onto the interface surface using colored or monochrome inks.

onto the interface surface using one of the following: cyan, magenta, yellow, black, or white.

CMY:

CMYK;

CMYRGB; and

spot color.

- 5 37. A method according to any one of claims 1 to 12, wherein the coded data is disposed on the surface in a magnetically or electrically readable form.

38. An interface system for enabling a user to instruct a computer system to perform an operation via:

- 10 an interface surface including an interface, the interface including visible graphical information and substantially invisible coded data; and

a sensing device which, when placed by the user into an operative position relative to the interface surface to designate at least some of the graphical information, senses indicating data indicative of the operation using at least some of the coded data;

- 15 the computer system being configured to:

receive the indicating data from the sensing device; and

perform the operation indicated by the indicating data;

wherein the graphical information designated by the user is at least partially indicative, to the user, of the operation.

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39. An interface system according to claim 38, wherein the graphical information designated by the user is adjacent, or substantially coincident with, coded data upon which the indicating data is based.

takes the form of any combination of:

text;

- graphics;
- images;
- buttons;
- icons; and
- 5 hypertext links.

- 41. An interface system according to claim 38, wherein the coded data takes the form of one or more control tags.
- 10 42. An interface system according to claim 41, wherein each of the control tags defines a discrete bundle of the coded data.
- 43. An interface system according to claim 41, wherein each of the control tags has a predetermined spatial extent on the surface.
- 15 44. An interface system according claim 41, wherein the tags take the form of bar codes.
- 45. An interface system according to claim 44, wherein the bar codes are two-
- 20 dimensional bar codes.
- 46. An interface system according to claim 41, wherein each control tag defines coded data that is unique compared to the coded data defined by other control tags on the
- 47. An interface system according to claim 46, wherein the unique coded data associated with each control tag identifies a position of that control tag within a region of

the surface.

48. An interface system according to claim 47, wherein the position is identified relative to the region itself.

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49. An interface system according to claim 47, wherein the position is identified relative to other control tags on the same surface.

50. An interface system according to claim 41, wherein each of the control tags includes a common feature in addition to the coded data.

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51. An interface system according to claim 50, wherein the common feature is configured to assist finding and/or recognition of the control tags by associated control tag reading apparatus.

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52. An interface system according to claim 50, wherein the common features are represented in a format incorporating redundancy of information.

53. An interface system according to claim 41, wherein each of the control tags includes one or more orientation features for enabling a rotational orientation of the control tag being read to be ascertained.

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54. An interface system according to claim 53, wherein the orientation features are represented in a format incorporating redundancy of information.

55. An interface system according to claim 41, wherein the coded data of each control tag is defined by a plurality of control tag elements, the coded data being encoded

by a plurality of control tag elements.

56. An interface system according to claim 55, wherein each element takes the form of a dot having a plurality of possible values.

5 57. An interface system according to claim 56, wherein the number of possible values is two.

58. An interface system according to claim 55, wherein when representing one of the possible values, the control tag elements absorb, reflect or fluoresce electromagnetic radiation of a predetermined wavelength or range of wavelengths to a predetermined greater or lesser extent than the interface surface.

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59. An interface system according to claim 55, wherein the possible values of the control tag elements are defined by different relative absorption, reflection or fluorescence of electromagnetic radiation of a predetermined wavelength or range of wavelengths.

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60. An interface system according to claim 47, wherein the coded data identifies remotely stored information defining the relative position.

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61. An interface system according to any one of claims 39 to 48, wherein the coded data includes region identification information that identifies the region within which the respective coded data is disposed.

62. An interface system according to any one of claims 39 to 48, wherein the region encompasses

63. An interface system according to any one of claims 38 to 51, wherein the coded

data includes data identification information that identifies data associated with the region within which the respective coded data is disposed.

64. An interface system according to any one of claims 41 to 51, wherein the coded
5 data includes region identification information that identifies the region within which the respective coded data is disposed, and at least a predetermined proportion of the control tags includes the region identification information.

65. An interface system according to any one of claims 41 to 51, wherein the coded
10 data includes data identification information that identifies data associated with the region within which the respective coded data is disposed, and at least a predetermined proportion of the control tags includes the data identification information.

66. An interface system according to any one of claims 38 to 51, wherein the
15 surface is defined by a page.

67. An interface system according to claim 66, wherein the page is paper or any other planar or laminar substrate.

- 20 68. An interface system according to any one of claims 38 to 51, wherein the coded data is printed onto the interface surface by means of a printer.

69. An interface system according to claim 67, wherein the printer is an ink printer.

spectrum.

71. An interface system according to claim 68, wherein the printer also prints the graphical information onto the interface surface.

72. An interface system according to claim 71, wherein the graphical information is
5 printed onto the interface surface using colored or monochrome inks.

73. An interface system according to claim 72, wherein the graphical information is printed onto the interface surface using one of the following combinations of colored inks:

10 CMY;
CMYK;
CMYRGB; and
spot color.

15 74. An interface system according to any one of claims 38 to 51, wherein the coded data is disposed on the surface in a magnetically or electrically readable form.